

Abstract

In a semiconductor memory chip module (2') for a smart card, a nonvolatile memory chip (EEPROM) (4) and a volatile memory chip (SRAM) (6) are stacked and coupled directly by vertical chip interconnections (16). The rapid-access volatile memory permits fast execution of programs. Permanent and safe storage of data is effected by reloading the data to the nonvolatile memory. A chip (8) with decoder circuits can be contained in a further level. Likewise integrated into a chip is a buffer capacitor (20) which is constantly recharged to a constant supply voltage during operation.

(Fig. 2)